

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

These amendments introduce no new matter and support for the amendment is replete throughout the specification and claims as originally filed. These amendments are made without prejudice and are not to be construed as abandonment of the previously claimed subject matter, or agreement with any objection or rejection of record.

Listing of Claims:

1. (Currently Amended) A composite gel comprising:

a) a dispersed phase comprising lipid droplets or particles;

b) a continuous phase aqueous matrix comprising a pH ranging from about pH 4 to pH 9, and one or more cross-linked proteins not cross-linked with formaldehyde, glutaraldehyde or other aldehydes; and,

c) supplemental constituents;

wherein the dispersed phase is embedded within the continuous phase matrix; and, whereby supplemental constituents or lipid droplets, suitable for ruminant ingestion, are protected against degradation, modification, or removal from the gel during passage through a rumen.

2. (Original) The composite gel of claim 1, wherein the supplemental constituents are selected from the group consisting of vitamins, nutrients, proteins, amino acids, polyunsaturated lipids, minerals, bioactive materials, and pharmaceuticals.

3. (Original) The composite gel of claim 1, wherein the supplemental constituents are in the dispersed phase.

4. (Original) The composite gel of claim 1, wherein the supplemental constituents are in the continuous phase matrix.

5. (Original) The composite gel of claim 1, wherein the lipid droplets range in size from about 0.1 μm to about 50 μm .

6. (Original) The composite gel of claim 5, wherein the lipid droplets range in size from about 0.1 μm to about 1 μm .

7. (Currently Amended) The composite gel of claim 5, wherein the lipid droplets comprise a specific surface area of more than about 10 m^2/ml of a filler phase.

8. (Original) The composite gel of claim 1, wherein the lipid droplets comprise one or more oils, fats, monoglycerides, diglycerides, triglycerides, or free fatty acids.

9. (Original) The composite gel of claim 1, wherein the lipid comprises about 10% to about 50%, or more, conjugated linoleic acid.

10. (Original) The composite gel of claim 9, wherein the lipid comprises about 25%, or more, conjugated linoleic acid.

11. (Currently Amended) The composite gel of claim 1, wherein the dispersed phase lipid comprises oil selected from the group consisting of: corn oil, poppy seed oil, fish oil, cotton seed oil, soybean oil, walnut oil, safflower oil, sunflower oil, sesame oil, canola oil, and linseed oil, ~~whole or modified oil seed, whole or modified beans, grape seeds, cotton seeds, safflower seeds, algae, microorganisms, yeasts, and protozoa.~~

12. (Original) The composite gel of claim 1, wherein the lipid comprises fatty acids selected from the group consisting of oleic acid, conjugated linoleic acid, linolenic acid, phytanic acid, omega 3 fatty acids, docosahexaenoic acid, and eicosapentaenoic acid.

13. (Original) The composite gel of claim 1, further comprising one or more emulsifiers.

14. (Original) The composite gel of claim 1, further comprising one or more hydrocolloids.

15. (Original) The composite gel of claim 1, wherein the proteins are selected from the group consisting of whey proteins, bovine blood plasma proteins, gelatin, peanut proteins, cereal proteins, fish proteins, soy proteins, and porcine blood proteins.

16. (Cancelled) The composite gel of claim 1, wherein the continuous phase matrix is resistant to conditions found in a rumen.

17. (Original) The composite gel of claim 1, wherein the continuous phase further comprises one or more reducing sugars.

18. (Original) The composite gel of claim 17, wherein the reducing sugars are selected from the group consisting of glucose, lactose, fructose, mannose, maltose, ribose, and galactose.

19. (Currently Amended) The composite gel of claim 1, wherein the proteins are cross-linked by Maillard reaction chemistries with reducing sugars.

20. (Original) The composite gel of claim 1, wherein the proteins are cross-linked by heat induced formation of disulfide bonds between the proteins.

21. (Original) The composite gel of claim 1, wherein the proteins are predominantly cross-linked by disulfide bonds, hydrophobic interactions, ionic interactions, or hydrogen bonding.

22. (Original) The composite gel of claim 1, wherein the continuous phase comprises about 10% to about 50% total solids by weight.

23. The composite gel of claim 22, wherein the total solids comprise about 10% to about 100% protein by weight.

24. (Original) The composite gel of claim 22, wherein the total solids comprises about 0% to about 50% reducing sugars by weight.

25. (Original) The composite gel of claim 1, wherein the continuous phase comprises about 10% to about 95% water.

26. (Original) The composite gel of claim 1, wherein the continuous phase comprises calcium, magnesium, sodium, or phosphate.

Claims 27 to 66 (Cancelled)